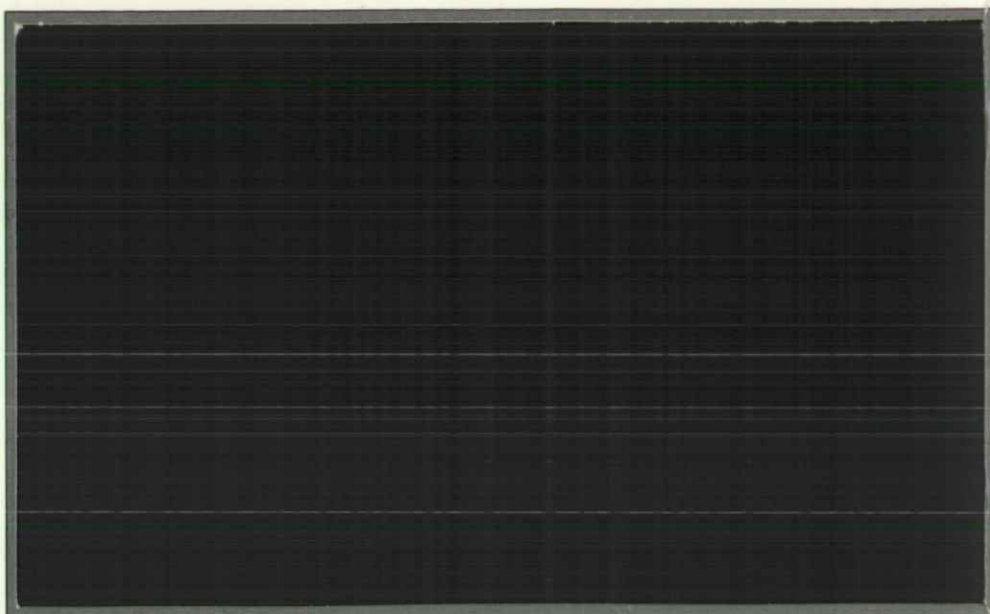




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The macroinvertebrate fauna of the
River Blythe at Cheswick Green

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Sources of information

The River Blythe, whose catchment includes areas to the south east and east of Birmingham, flows north to join the R. Cole and then the R. Tame, which in its turn discharges into the R. Trent.

In 1982 five sites were sampled on the R. Blythe as part of the River Communities Project (RCP). Field sampling was undertaken by biologists from the Severn-Trent Water Authority, using standard RCP procedures. The sampling protocol involved 3-minute pond-net samples encompassing all available habitats in each of spring, summer and autumn. Sample processing and the identification of the macroinvertebrate fauna was then carried out by staff of the River Laboratory, Wareham, Dorset.

This brief report provides information on the fauna recorded at Cheswick Green (Nat. Grid Ref. SP 127753), the most upstream location included in the survey.

In July 1989, further sampling was undertaken at the same site in a separate project on macrophyte-invertebrate relationships, sponsored by the Nature Conservancy Council. On this occasion, the pond-net samples were of 15 sec. duration and each one was taken on a separate habitat type. Samples were examined from six habitat types (algae, *Glyceria*, *Elodea*, gravel, *Ranunculus*, tree roots) and the fauna was examined as far as available keys allowed, except for the Sphaeriidae, Oligochaeta and Chironomidae. Note that these three taxonomic groups were identified in the 1982 survey.

The site

The R. Blythe at Cheswick Green is a small lowland stream, just 3.8 km from the source and ~2.5 m in width. Some sections of the stream are heavily shaded by trees whilst others are more open in character. In July 1989 a 100 m section of the stream was found to have 47% cover of submerged macrophyte, 46% cover of non-macrophyte substratum and 7% emergent vegetation. Of the submerged vegetation, algae (*Cladophora*) was dominant, but *Ranunculus aquatilis* and *Elodea nuttallii* were also present in significant amounts. Pebbles/gravel was the dominant non-macrophyte substratum. The emergent vegetation included *Glyceria x pedicillata* and *Apium nodiflorum* but heavy grazing and trampling by cattle affected the stream margins. The six locations sampled for invertebrates varied in depth between 5 and 50 cm.

The fauna

A total of 80 taxa have been recorded at Cheswick Green as a result of the 3 season survey in 1982 and the summer-only survey in 1989. As shown in the following list, 69 taxa were recorded in 1982 and the 1989 survey contributed a further 11 taxa.

Macroinvertebrate fauna of Cheswick Green (SP 127753)

Major taxonomic group	No. taxa found in 1982 (3 seasons)	Additional taxa found summer 1989	Total taxa recorded
Gastropoda	3	3	6
Bivalvia	5		5
Oligochaeta	7		7
Hirudinea	3	1	4
Hydracarina	1		1
Crustacea	2		2
Ephemeroptera	5		5
Plecoptera	2		2
Hemiptera	2	1	3
Coleoptera	7	5	12
Megaloptera	1		1
Trichoptera	9		9
Diptera	<u>22</u>	<u>1</u>	<u>23</u>
	69	11	80

The individual taxa recorded in each of spring, summer and autumn 1982 are listed at the end of this report. Taxa present in summer 1989 are also given and those previously recorded in 1982 are distinguished from those first reported in 1989.

Cheswick Green supports a reasonably diverse range of macroinvertebrates. The fauna is characteristic of a small headwater stream in the Midlands and East Anglia. Most of the species found at the site are common freshwater invertebrates and there are no nationally rare taxa.

When the faunal list is examined in relation to the frequency of occurrence of taxa in the IFE 438 site data-base, there are just 7 taxa at Cheswick Green which occurred at 20 or fewer sites within the 438 site data-base. None of these can be regarded as rare and their low frequency of occurrence in the data-base is partly because it still includes a relatively limited number of small stream sites. In addition, one hemipteran and four species of Coleoptera found at Cheswick Green are more typical of ditches and standing water than streams and rivers. The 7 taxa are listed below, together with brief comments on their status and typical habitats.

Hirudinea

Trocheta subviridis (At 16 sites in the IFE data-base)
Widespread, but not common in England

Hemiptera

Nepa cinerea (At 12 sites in the IFE data-base)
Common in the Midlands, but more typical of standing water

Coleoptera

Helophorus aequalis (1 site in the IFE data-base)
(formerly *H. aquaticus*) Ubiquitous; typical of grassy pools and ditches
Helophorus grandis (9 sites in the IFE data-base)
Ubiquitous; typical of grassy pools and ditches
Helophorus minutus (5 sites in the IFE data-base)
Ubiquitous; typical of grassy ponds

Hydrobius fuscipes (8 sites in the IFE data-base)
Ubiquitous; typical of pools with detritus

Trichoptera

Limnephilis extricatus (20 sites in the IFE data-base)
Common in silty and well vegetated regions of
streams, small rivers and canals

The site at Cheswick Green falls within Group 8B of the running-water site classification scheme based on macroinvertebrates which has been developed by the IFE. Group 8B includes 10 sites, 8 of which are the uppermost sites examined on lowland streams in the Midlands and East Anglia. These 10 sites have a mean distance from source of 4.8 km and a mean width of 1.9 m.

MACROINVERTEBRATE FAUNA OF THE RIVER BLYTHE AT CHESWICK GREEN

4

a) 1982 Survey (3 seasons)

Taxa recorded in 1982 are listed in taxonomic sequence.

Positive records for individual seasons are denoted with a + in the appropriate column.

Left-hand-column - 26 April 1982
Middle column - 23 July 1982
Right-hand-column - 18 October 1982

b) 1989 Survey (18 July)

* denotes taxa in the 1982 list which were also recorded in 1989.

Taxa recorded in 1989 but not 1982 are listed separately on the right hand side of the page.

1982		1989
* Potamopyrgus jenkinsi	+++	Valvata piscinalis
* Lymnaea peregra	+++	Anisus vortex
Ancylus fluviatilis	+++	Gyraulus albus
Sphaerium corneum	+++	
Pisidium casertanum	++0	
Pisidium personatum	++0	
Pisidium subtruncatum	+++	
Pisidium nitidum	+0+	
Nais elinguis	+++	
Nais pardalis	0+0	
Stylaria lacustris	0++	
Limnodrilus claparedeianus	00+	
Limnodrilus hoffmeisteri	+++	
Aulodrilus plurisetia	+++	
Lumbriculidae	0+0	
* Glossiphonia complanata	+++	Helobdella stagnalis
Erpobdella octoculata	+00	
Trocheta subviridis	0+0	
* Hydracarina	+++	
* Asellus aquaticus	0++	
* Gammarus pulex	+++	
* Baetis scambus group	0++	
* Baetis vernus	0++	
* Baetis rhodani	+++	
Habrophlebia fusca	+00	
* Ephemerella ignita	0+0	
Amphineura standfussi	+00	
Nemoura cinerea	+00	
* Velia caprai (* = Velia sp.)	0+0	Sigara dorsalis
Nepa cinerea	0+0	
* Brychius elevatus	+00	
* Haliphus lineatocollis	0+0	Haliphus fluviatilis
* Platambus maculatus	0++	Potamonectes sp.
Ilybius fuliginosus	0+0	Agabus sp.
* Helophorus brevipalpis	0+0	Helophorus aequalis
* Helophorus minutus	0+0	Hydrobius fuscipes
* Helophorus grandis	0+0	
* Sialis lutaria	0+0	

MACROINVERTEBRATE FAUNA OF THE RIVER BLYTHE AT CHESWICK GREEN

5

1982	1989
Tinodes waeneri	+00
Hydropsyche angustipennis	+++
Hydropsyche siltalai	00+
Hydroptila sp.	0+0
* Limnephilus lunatus group	+00
Limnephilus extricatus	00+
Anabolia nervosa	+00
Potamophylax group	0+0
Halesus sp.	+00
Tipula montium group	00+
* Dicranota sp.	0+0
Limnophila (Eloeophila) sp.	+00
Apsectrotanytus trifascipennis	0+0
Procladius sp.	0+0
Thienemannimyia group	+++
Potthastia longimana group	0+0
Brillia modesta	+++
Eukiefferiella group	+++
Synorthocladius semivirens	0+0
Cricotopus group	+++
Procladius olivacea	0++
Chironomus sp.	0+0
Microtendipes sp.	00+
Paratendipes sp.	0+0
Polypedilum sp.	++0
Phaenopsectra sp.	+00
Micropsectra group	0++
Simulium (Nevermannia) vernal group	+00
* Simulium (Eusimulium) aureum group	0++
* Simulium (Simulium) ornatum group	0++
* Empididae	00+

Ephydriidae



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